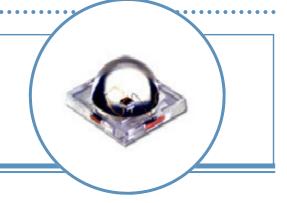
1-Watt SMD Blue LED Lamp (7mm)



OVSPBCCR8

- High luminous flux output for illumination
- Exposed pad design for excellent heat transfer
- Designed for high current operation
- · Reflow soldering applicable

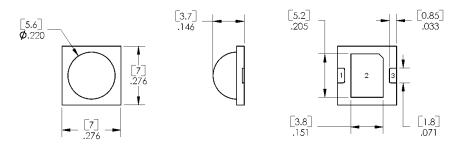


The OVSPBCCR8 is designed to handle high current and heat and emits sufficient light for a variety of lighting and illumination applications. Small size and high power allow for compact and cost-effective lighting solutions.

Applications

- Automotive: Exterior and Interior Lighting
- Backlighting LCD Displays: Televisions and Computer Monitors
- Entertainment: Studios, Theaters, Nightclubs, Restaurants
- · Accent Lighting: Wall Wash, Landscape, Spotlight
- Bicycle and Pedestrian Safety Lights

Part Number	Material	Emitted Color	Flux Typ. lm	Lens Color
OVSPBCCR8	InGaN	Blue	11	Water Clear



1 ANODE 2 HEAT SINK 3 CATHODE

DIMENSIONS ARE IN INCHES AND [MILLIMETERS].



Data is subject to change without prior notice.



Absolute Maximum Ratings

 $T_A = 25^{\circ} \text{ C}$ (on metal core PCB¹) unless otherwise noted

Storage Temperature Range	-30 ~ +85 ℃
Operating Temperature Range	-30 ~ +85 ℃
Reverse Voltage	5 V
Continuous Forward Current	300 mA
Peak Forward Current (10% Duty Cycle, 1KHz)	500 mA
Power Dissipation	1.00 W
Junction Temperature	+125℃
Junction-to-case ²	15℃/W

Notes:

Electrical Characteristics

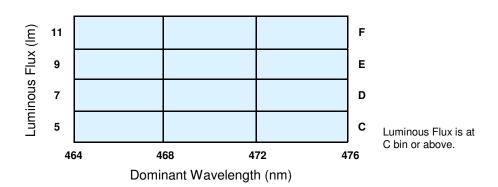
T_A = 25° C (on metal core PCB¹) unless otherwise noted

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
lumen	lumen Luminous Flux		11		lm	I _F = 300mA
V _F	V _F Forward Voltage		3.6	4.0	V	I _F = 300mA
I _R	I _R Reverse Current			10	μΑ	$V_R = 5V$
λ_D Dominant Wavelength		464	470	476	nm	$I_F = 300 \text{mA}$
2 Θ½ 50% Power Angle			140		deg	I _F = 300mA

Note:

Standard Bins (I_F = 450mA)

Lamps are sorted to luminous flux (Φ_V) and dominant wavelength (λ_D) and ranked as shown. Orders for OVSPBCCR8 may be filled with any or all bins contained as below.



Important Notes:

- 1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
- 2. Pb content <1000PPM.
- To designate luminous intensity ranks, please contact OPTEK.

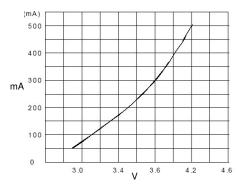
Metal core PCB defined as good heat transmission substrate (thickness of 2.0mm Al-based PCB 20x20mm, O_{JC} <15 ℃/W could do)

^{2.} Rth test condition: mounted on 2.0mm Al-based PCB 20x20mm

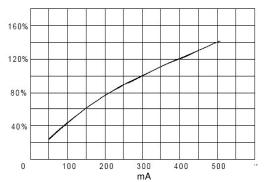
Metal core PCB defined as good heat transmission substrate (thickness of 2.0mm Al-based PCB 20x20mm, O_{JC} <15 ℃/W could do)



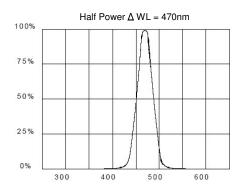
Typical Electro-Optical Characteristics Curves



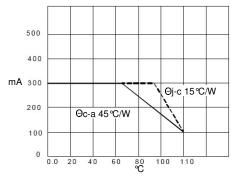
Forward Current vs. Forward Voltage



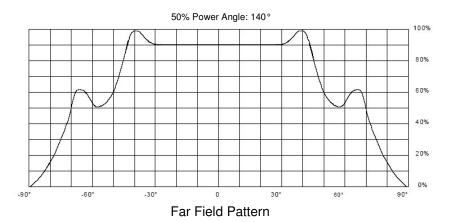
Relative Luminous Flux vs. Forward Current



Relative Luminous Intensity vs. Wavelength

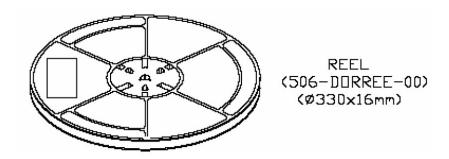


Maximum Forward DC Current vs. Ambient Temperature

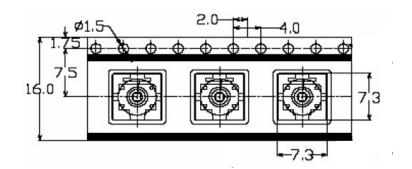




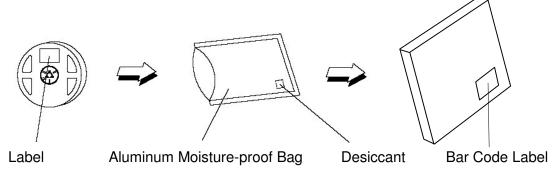
Reel Dimensions (13 Inch)



Carrier Tape Dimensions: Loaded Quantity 1400 PCS per Reel



Moisture Resistant Packaging





Issue	Change Description	Approval	Date
1.0	Initial Release	R. Bailey	5/20/05
1.1	Corrected heat sink from 3.1mm to 3.8mm.	R. Bailey	6/10/05
1.2	Corrected Page 1 typical luminous flux to 11 lm.	J. Haynie	7/19/05